in the text, vocabulary, and notes. At the bottom of the page are generous citations to the different school grammars. The notes abound in explanations of historical allusions and in references to several histories.

The general appearance of the book is altogether pleasing, its one defacement being a multitude of small errors, particularly in inconsistent marking of vowels. These mistakes are of a kind easily corrected and they are so numerous that this edition should at once be replaced by one far less misleading. It is a pity that so good a book should be disfigured so needlessly.

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COLGATE ACADEMY

Arithmetic for Schools. By CHARLES SMITH. Rewritten and revised by Charles L. Harrington. New York: The Macmillan Company, 1895. Pp. 329 + x. Price 90 cents.

IF any teacher is looking for a good specimen of the old-time arithmetic, the arithmetic that contains everything from counting to geometric progressions, the arithmetic that pays no special attention to logical or to psychological sequence, this is one of the best on the market. There are good schools and there are good teachers that prefer such a book to those prepared on more modern lines; for such this work will be valuable. Of all text-books that have recently appeared there is probably not one that has so good a treatment of interest and exchange as this; upon these Mr. Harrington must have expended a great deal of time and thought. The paper and the typography of the work are both excellent, and the binding is superior, of course, to that done in England.

It is hardly fair to criticise the general scope of the work. If there were not a demand for such books they would not be printed. And yet it does not seem as if there are many American schools where such general compendia are now used. The book is written on the general times laid down by Adam Riese over three hundred years ago, and generally followed until Busse, in the Philanthropin at Dessau began the modern teaching of the subject over a century back. It proceeds on the supposition that a child can read before he begins arithmetic, and that he then begins counting in unlimited space, then addition with large numbers, then subtraction, etc. To be sure there is much here that Riese never dreamed of, but the general plan is his. Here are instructions and problems for children in the first three grades

(§§ 27, 30, 19, etc.), side by side with matter connected with notation that is practically useless even to the astronomer (§ 15, compare § 7). Here are definitions that are assimilated in the first grade, and if it be said that they are not learned there it may be answered, "so much the better."

On the whole the definitions are not very satisfactory. Sections 56, 57 do not allow the division of $10 by 2; sections 58 and 59 do allow it. By taking the word "exact" as used in section 131, and applying it to section 74, 5 is a factor of 12. By the definition in section 90, 6 is the greatest common measure of $18, and 24 books, and by section 134, 2 is an aliquot part of $10. These are not isolated cases.

It was said above that this was one of a type of books that paid no attention to logical or to psychological order. The two are not the same, of course. Logically there is no reason why decimal fractions and square root (including surds) should not precede common fractions, as is here the case. But psychologically it is so unjustifiable that even the authors would doubtless explain it by saying that this book is intended for review purposes, and hence the psychological order is of no moment. But if the book is intended for review purposes, what explanation can be given of the large amount of primary matter ($1 + 9$, $12 - 5$, etc.) that it contains? Of course it is purely an error that a parenthesis is recommended on p. 37, and not explained until p. 79, but that the square root of 4912.888464 should precede the reduction of 12/4 to a whole number (exs. 42, p. 86, and 5, p. 90) or that circulating decimals (p. 112) should precede the table and the explanation of United States money (p. 126), or that many other similar features should be so patent, is surely not the result of carelessness.

It was also said in the beginning that this was one of the type of works that contain everything from counting to progressions. Of course the statement is not intended to be taken literally. Indeed, this book has omitted a considerable amount of mediæval arithmetic. Alligation is almost wanting (see p. 221), and compound interest is not to be found, and general average has gone by the board. But Troy weight and apothecaries' weight and fluid measure and the old cistern problems remain, grave monuments of arithmetical history.

The treatment of simple proportion is better than usual in text-books; compound proportion is omitted. But one very strange thing strikes the reader: after giving the explanation of simple proportion the authors say that examples can best be solved by the Unitary

Method of Analysis. Now this is very true and very commendable, but they forthwith proceed to give this Unitary Method *as proportion;* it is quite like calling 2×3 an example in addition. As a matter of fact the unitary method is not proportion and should not be classed under that caption.

It is unnecessary to enter more into detail concerning the merits or demerits of the work, although there are several prominent features both good and questionable that deserve mention. The scope and style of the work can be quite well judged from what has been set forth.

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A Course in Expository Writing. By GERTRUDE BUCK and ELISABETH WOODBRIDGE. New York: Holt, 1899. 12mo. ix + 292 pp.

THIS book, written by two instructors in Vassar College, provides material for twenty-three lessons in the writing of description and exposition. The preface, which might have been prefixed to any recent text-book of rhetoric, is devoted to the discussion of how to interest students in their writing, and contains several good suggestions. Teachers are advised as far as possible to supply pupils with a real audience, and not to criticise too many things at once; the writers find a case conceivable "where it would be better to let even spelling go to the winds for a while, until other things had been gained."

In treating the subject of exposition, the writers follow the thoroughly sound belief that it is through description, "the communication of our immediate sense-perception itself," that one can best approach exposition, which is "our interpretation of sense-experience." Accordingly they devote the first fifty odd pages to pure description and the next hundred to "description in its relation to exposition," reserving only one hundred and forty pages for exposition proper, or "definition in its relation to exposition." We may be permitted to doubt the wisdom of this division. Less space than fifty pages should suffice to teach the average pupil the difference between description proper and expository, or interpretative, description, the kind discussed in chapter iii; to the latter, proportionately, too much space is given; while the treatment of exposition proper is perhaps not quite adequate. We do not believe that the student can get from this book alone a clear idea